IN THE UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF TEXAS
WACO DIVISION

WSOU INVESTMENTS, LLC d/b/a BRAZOS LICENSING AND DEVELOPMENT, Plaintiff, v. HUAWEI TECHNOLOGIES USA INC., *et al.*, Defendants.	§ § § § § § § § § § § §	CIVIL ACTION No. 6:20-CV-533-ADA CIVIL ACTION No. 6:20-CV-535-ADA CIVIL ACTION No. 6:20-CV-540-ADA CIVIL ACTION No. 6:20-CV-543-ADA

DEFENDANTS' SUR-REPLY CLAIM CONSTRUCTION BRIEF

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TABLE OF PROPOSED CONSTRUCTIONS

I. U.S. Patent No. 6,882,627 ("'627 Patent") (Case No. 6:20-cv-00533)

A. "performing a SRG (shared risk group) topology transformation of the network topology into a virtual topology that discourages the use of network resources" (claims 1, 29, 30)

Huawei's Proposed Construction	WSOU's Proposed Construction
"performing a transformation of links and/or nodes of a SRG (shared risk group) of the network into a virtual topology that discourages the use of network resources"	Plain and ordinary meaning

B. "second code means adapted to, for at least one shared risk group, determine if any of the at least one shared risk group includes any of the first sequence of network resources" (claim 29) / "means adapted to, for at least one shared risk group, determine if any of the at least one shared risk group includes any of the first sequence of network resources" (claim 30)

Huawei's Proposed Construction	WSOU's Proposed Construction
Subject to 35 U.S.C. § 112, ¶ 6 Structure: Indefinite for failure to disclose corresponding structure	Subject to 35 U.S.C. § 112, ¶ 6 Structure: processing platform readable medium, and equivalents thereof (claim 29) / a network management platform, and equivalents thereof (claim 30) Algorithm (if required): *see, e.g.,* 2:13-54, 3:54-4:15, 4:45-5:33, 6:23-37, 6:52-7:52, 9:18-12, 12:46-50, Figs. 3A, 3B, 6B, and equivalents thereof

C. "third code means for performing a SRG (shared risk group) topology transformation of the network topology into a virtual topology which discourages the use of network resources" (claim 29) / "means for performing a SRG (shared risk group) topology transformation of the network topology into a virtual topology which discourages the use of network resources" (claim 30)

Huawei's Proposed Construction	WSOU's Proposed Construction
Subject to 35 U.S.C. § 112, ¶ 6	Subject to 35 U.S.C. § 112, ¶ 6

Structure: A processing platform-readable medium comprising algorithms for link and node transformation such as those disclosed in Figures 3C, 3D, 4A, and 4B and the corresponding embodiments disclosed in 6:49-7:52, and equivalents thereof (claim 29) A network management platform comprising algorithms for link and node transformation such as those disclosed in Figures 3C, 3D, 4A, and 4B, and the corresponding embodiments disclosed in 6:49-7:52, and equivalents thereof (claim 30)	Structure: processing platform readable medium, and equivalents thereof (claim 29) / a network management platform, and equivalents thereof (claim 30) Algorithm (if required): *see, e.g.,* 2:13-3:18, 6:49-7:52, 7:63-8:28, 8:30-9:35, Figs. 2, 3A-3D, 4A, 4B, 5A, 5B, 6A-6E, and equivalents thereof

II. U.S. Patent No. 6,999,727 ("the '727 Patent") (Case No. 6:20-cv-00543)

A. "a number of corrected errors (BCE) in a non-SCS base reference time period" (claims 1, 4-7)

Huawei's Proposed Construction	WSOU's Proposed Construction
"the number of background corrected errors that have been corrected within a base reference time period which is different than the base reference time period used to detect uncorrected blocks"	Plain and ordinary meaning

B. "means for implementing a Performance Monitoring function based on data retrieved through a Forward Error Correction function" (claims 4, 5)

Huawei's Proposed Construction	WSOU's Proposed Construction
Subject to 35 U.S.C. §112, ¶6 Structure: Algorithm disclosed in Figure 1, and equivalents thereof	Subject to 35 U.S.C. § 112, ¶ 6 Structure: telecommunication network management system, and equivalents thereof; Algorithm (if required) *see e.g.*, 1:63-2:21, 2:36-4:54, Fig. 1

C. "means for classifying said blocks either as corrected or uncorrected through the Forward Error Correction function" (claims 4, 5)

Huawei's Proposed Construction	WSOU's Proposed Construction
Subject to 35 U.S.C. § 112, ¶ 6 Structure: Indefinite for failure to disclose corresponding structure	Subject to 35 U.S.C. § 112, ¶ 6 Structure**:** network node performing Forward Error Correction function, and equivalents thereof

D. "means for calculating the Performance Monitoring function by implementing a correlation of the information regarding said correct and uncorrected blocks" (claims 4, 5)

Huawei's Proposed Construction	WSOU's Proposed Construction
Subject to 35 U.S.C. § 112, ¶ 6 Structure: Algorithmic structure: $BER_{IN}=\Sigma BCE/(NSEC-\Sigma SCS)$, and equivalents thereof	Subject to 35 U.S.C. § 112, ¶ 6 Structure: telecommunication network management system, and equivalents thereof Algorithm (if required): *see e.g.*, 1:63-2:21, 2:36-4:54, Fig. 1, and equivalents

E. "implementing a Performance Monitoring Function based on data retrieved through a Forward Error Correction Function" (claims 6, 7)

Huawei's Proposed Construction	WSOU's Proposed Construction
Subject to 35 U.S.C. §112, ¶6 Function: implementing a Performance Monitoring function based on data retrieved through a Forward Error Correction function Structure: Algorithm disclosed in Figure 1, and equivalents thereof	Plain and ordinary meaning

F. "classifying said blocks either as corrected or uncorrected through the Forward Error Correction function" (claims 6 and 7)

Huawei's Proposed Construction	WSOU's Proposed Construction
Subject to 35 U.S.C. § 112, ¶ 6	Plain and ordinary meaning

Structure: Indefinite for failure to disclose corresponding structure	

III. U.S. Patent No. 7,508,755 ("the '755 Patent") (Case No. 6:20-cv-00535)

A. "originating network device" (claims 1, 3, 20)

Huawei's Proposed Construction	WSOU's Proposed Construction
"a network device of a primary LSP which is not a source network device of the same primary LSP"	Plain and ordinary meaning

B. "switch over message" (claims 1, 5, 8, 10, 13, 16, 18, 20, 23, 25)

Huawei's Proposed Construction	WSOU's Proposed Construction
"a message which instructs a device to perform a switch over to the alternate path and which is not a message that indicates a fault has occurred in the network"	Plain and ordinary meaning

C. "means for re-routing . . . in a backwards direction" terms (claims 8, 23, 25)

Huawei's Proposed Construction	WSOU's Proposed Construction
Subject to 35 U.S.C. §112, ¶6 Structure: Indefinite for failure to disclose sufficient corresponding structure	Subject to 35 U.S.C. §112, ¶ 6 Structure: merging network device, and equivalents thereof Algorithm (if required): *see e.g.,* 2:7-32, 2:43-60, 3:13-36, Figs. 1, 2, 3

D. "means for re-routing traffic traveling along a bi-directional LSP in a forward direction to an alternate path in the forward direction" (claims 20, 25)

Huawei's Proposed Construction	WSOU's Proposed Construction
Subject to 35 U.S.C. §112, ¶6 Structure: Indefinite for failure to disclose corresponding structure	Subject to 35 U.S.C. § 112, ¶ 6 Structure: originating network device and equivalents thereof

	Algorithm (if required): *see, e.g.,* 1:51-56, 2:7-32, 2:43-60, Figs. 1, 2, 3

E. "means for transmitting a switch over message along the alternate path in the forward direction to a merging network device responsible for re-routing traffic traveling along the bi-directional LSP in a backward direction to the alternate path in the backward direction" (claim 20) / "means for transmitting a switch over message, along the alternate path in the forward direction, for re-routing traffic traveling along the bi-directional LSP in a backwards direction" (claim 25)

Huawei's Proposed Construction	WSOU's Proposed Construction
Subject to 35 U.S.C. § 112, ¶ 6 Structure: Indefinite for failure to disclose corresponding structure	Subject to 35 U.S.C. § 112, ¶ 6 Structure: originating network device, and equivalents thereof Algorithm (if required): *see, e.g.,* 1:51-56, 2:7-32, 2:43-60, 3:9-36, Figs. 1, 2, 3

F. "means for means for [sic] receiving traffic traveling along a bi-directional LSP in a forward direction to an alternate path in the forward direction" (claim 23)

Huawei's Proposed Construction	WSOU's Proposed Construction
Subject to 35 U.S.C. §112, ¶6 Structure: Indefinite for failure to disclose corresponding structure	Subject to 35 U.S.C. § 112, ¶ 6 Structure: merging network device and equivalents thereof Algorithm (if required): *see, e.g.,* 2:7-32, 2:43-60, 3:13-36, Figs. 1, 2, 3

IV. U.S. Patent No. 8,417,112 ("the '112 Patent") (Case No. 6:20-cv-00540)

A. "determining whether said collected BER values worsen over time" (claims 1, 11)

Huawei's Proposed Construction	WSOU's Proposed Construction
"determining whether said collected BER values worsen over time by comparing one or more of said recent ones of said collected	Plain and ordinary meaning

BER values with said other collected BER values”	

Defendants Huawei Technologies USA Inc., *et al*., (collectively, "Huawei") respectfully submit this Sur-Reply Claim Construction Brief to Plaintiff's ("WSOU's") Reply Claim Construction Brief ("Reply") (*See, e.g.*, -00533, Dkt. 47).

I. U.S. Patent No. 6,882,627 ("'627 Patent") (Case No. 6:20-cv-00533)

A. "performing a SRG (shared risk group) topology transformation of the network topology into a virtual topology that discourages the use of network resources" (claims 1, 29, 30)

WSOU does not respond to Huawei's Responsive Brief, arguing instead about its understanding of the term "network resources." Reply at 1. As can be clearly seen in Huawei's proposed construction, however, Huawei does not construe the term "network resources," but instead construes the otherwise undefined and ambiguous term "SRG (shared risk group) topology transformation of the network topology."

Huawei's Responsive Brief established that the term "topology transformation" is described in the specification of the '627 Patent as comprising "Link Transformation" and "Node Transformation," and nothing else. Resp. at 2. This term would therefore be unsupported by the specification if it comprised anything more than these two items. *See id*. at 2. Moreover, Huawei's Responsive Brief further demonstrated how network topologies are correspondingly and consistently described as being comprised of nodes and links, which are then the objects being "transformed," per the specification and the relevant claims. *See id*. at 2-3. WSOU's Reply Brief ignores these points entirely and instead focuses on the red herring of "network resources."[1] The specification of the '627 Patent describes what a network topology is and how it is "transformed," and Huawei's proposed construction corresponds directly to these descriptions.

[1] Despite focusing on "network resources," WSOU fails to describe what other "network resources" could be, nor does WSOU detail how Huawei's proposed construction limits an open-ended view of "network resources."

B. "second code means adapted to, for at least one shared risk group, determine if any of the at least one shared risk group includes any of the first sequence of network resources" (claim 29) / "means adapted to, for at least one shared risk group, determine if any of the at least one shared risk group includes any of the first sequence of network resources" (claim 30)

Importantly, WSOU provided no rebuttal to the testimony of Dr. Lavian, who found, in sum, that a POSITA would not have found any of the corresponding structures proposed by WSOU for these means-plus-function terms for the '627 Patent to be sufficient, or to be clearly linked to the claimed functions. *See generally*, Resp., Ex. 2, at ¶¶ 54-73. As such, Dr. Lavian's expert testimony stands unrebutted. As WSOU failed to proffer the testimony of any rebuttal expert, WSOU can only argue that Dr. Lavian's expert Declaration is "conclusory." Reply at 2. However, the depth and breadth of Dr. Lavian's 45-page Declaration and the well-reasoned opinions and conclusions regarding the indefiniteness of these means-plus-function terms evidences otherwise.

With regard to WSOU's Reply Brief, the claims at issue recite what the patent describes as general-purpose computers performing a special purpose function, Resp. at 6, n. 4, and WSOU's Brief fails to rebut the corresponding (and absent) requirement of algorithmic support that would save these claims from indefiniteness. WSOU's first citation to *In re Beauregard* is nonsensical, given that case simply affirmed the patentability of so-called "computer readable medium" claims, and did not address the separate requirement for supporting the corresponding structure of means-plus-function claims with an algorithm. *See In re Beauregard*, 53 F.3d 1583, 1584 (Fed. Cir. 1995). WSOU's citation to *CLS Bank Int'l v. Alice Corp. Pty. Ltd.*, 717 F.3d 1269, 1287 (Fed. Cir. 2013) likewise fails, given that case is directed to Section 101 patentability, and not Section 112 structural support. Similarly, WSOU's response to *Net MoneyIn, Inc. v. VeriSign, Inc.* ignores the fact that circular structural definitions that merely refer back to the preamble, such as those proposed by WSOU here, are "redundant and illogical," and therefore fail to provide actual corresponding structure. *See Net MoneyIn, Inc. v. VeriSign, Inc.*, 545 F.3d 1359, 1366 (Fed. Cir.

2008).[2] And WSOU's footnote regarding *Williamson v. Citrix Online* simply restates Huawei's (correct) contention that "the specification must disclose an algorithm *in addition to* a general purpose computer." Reply at 3 (emphasis in original).

WSOU repeats its arguments regarding the *Katz* exception to the algorithm requirement (*see* Reply at 3), but ignores that this exception is "narrow," and applies ***only*** when ***no*** special programming is required to perform the function. *See Ergo Licensing, LLC v. CareFusion 303, Inc*. 673 F.3d 1361, 1364-65 (Fed. Cir. 2012). WSOU's new citations regarding the *Katz* exception are similarly unavailing. For example, *Farstone Technology, Inc. v. Apple Inc.*, 2015 WL 857706, *7-*8 (C.D. Cal. 2015), found the term "selecting means" to be common input means such as "***a keyboard and mouse***" that did not require an algorithm, and *Typhoon Touch Technologies, Inc. v. Dell, Inc.*, 659 F.3d 1376, 1384-86 (Fed. Cir. 2011), found that an algorithm for the term "means for cross-referencing" ***was required*** but was ***expressly described*** in a section of the specification entitled "cross-referencing." Indeed, none of WSOU's citations support the idea that a "means adapted to, for at least one shared risk group, determine if any of the at least one shared risk group includes any of the first sequence of network resources," could be performed by an off-the-shelf general purpose computer. The corresponding structure for this means-plus-function claim term therefore requires algorithmic support.[3]

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[2] While WSOU argues that there is inconsistency between Huawei's treatment of the structure for the "second code means" and the "third code means" terms (*see* Reply at 3), this argument ignores the fundamental difference between the two limitations. The "second code means" invokes a general purpose computer that lacks algorithmic support in the specification, and is therefore indefinite, while the "third code means" invokes a general purpose computer that contains algorithmic support in the specification, and is therefore limited to that disclosed algorithm. Huawei thus has by no means "agree[d] to the corresponding structures" of the third code means as alleged by WSOU (*see* Reply at 3), as discussed in more detail below.

[3] WSOU tacitly argues that the claim language *itself* provides the corresponding algorithm. *See* Reply at 3. However, it is black letter law that in means-plus-function claiming, the specification (and not the claims) must provide the corresponding structure. *See, e.g., Williamson*

In response to this requirement, WSOU again cites to hundreds of lines from the specification of the '627 Patent. *See* Reply at 4. However, while WSOU highlights the same example from its Opening Brief (from the '627 Patent at 6:23-37), WSOU ignores that this example ***assumes*** that that those shared risk groups already exist and have been analyzed on the network topology, thus failing to disclose how the SRG determination and analysis would occur. WSOU does not respond to this fundamental defect in its Reply or specifically address any other part of the specification.[4] Moreover, WSOU's one additional citation to the '627 Patent at 6:63-66 ignores the fact that these lines are from the subsequent topology transformation section (i.e., the next step in the claim) and not the "determination" step. Further, 6:63-66 likewise does not disclose *how* SRG determination will occur, and instead assumes such SRG determination has already occurred, with transformation applying to the already-determined SRGs. Given that there is no clear link to any structural component or algorithm in the specification of the '627 Patent for performing the claimed functions, claims 29 and 30 are indefinite and therefore invalid.

C. "third code means for performing a SRG (shared risk group) topology transformation of the network topology into a virtual topology which discourages the use of network resources" (claim 29)

"means for performing a SRG (shared risk group) topology transformation of the network topology into a virtual topology which discourages the use of network resources" (claim 30)

In its Reply Brief, WSOU makes no attempt to explain how a function of "SRG (shared risk group) topology transformation" was well-known and able to be performed by a general purpose computer. WSOU instead points to its arguments from the previous section (Section 2),

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v. Citrix Online, LLC, 792 F.3d 1339, 1347 (Fed. Cir. 2015) (the scope of "means-plus-function" claims is limited "to only the structure, materials, or acts *described in the specification* as corresponding to the claimed function and equivalents thereof.") (emphasis added).

[4] While WSOU claims that Dr. Lavian's testimony as "conclusory," WSOU ignores that Dr. Lavian went through each and every passage cited by WSOU to demonstrate why they did not support this limitation, something WSOU failed to do in either of its Briefs.

which involve claims with entirely different language. *See* Reply at 5. WSOU attempts to transplant these arguments onto one another without addressing the actual claim language, which only serves to highlight the impropriety of WSOU's proposed construction for the present terms.

In response to the requirement for an algorithm, WSOU again points to several columns from the specification, with no further explanation.[5] WSOU has thus failed to demonstrate how this litany of citations from the specification of the '627 Patent is clearly linked to and accomplishes the claimed functions for these terms. Further, WSOU claims that Huawei has "changed [its] position and now appear[s] to agree with WSOU as to the corresponding structures of a processing platform-readable medium and a network management platform." Reply at 5. This is false, as is clearly shown above in Huawei's proposed construction.

Specifically, Huawei's proposed structure is a "processing platform-readable medium ***comprising algorithms for link and node transformation such as those disclosed in Figures 3C, 3D, 4A, and 4B and the corresponding embodiments disclosed in 6:49-7:52***." (emphasis added). Thus, the "processing platform-readable medium" itself is not the corresponding structure, as alleged by WSOU. Rather, Huawei's corresponding structure is the "processing platform-readable medium comprising the required algorithms disclosed in 6:49-7:52." Huawei has never "agree[d] with WSOU" that the processing platform-readable medium, by itself, is the corresponding structure.[6] As such, Huawei's proposed construction should be adopted.

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[5] Interestingly, WSOU faults *Huawei* for "conclusory" arguments in addressing the 200+ lines of the specification WSOU cited as the alleged supporting algorithmic structure. *See* Reply at 5. This ironic argument aside, WSOU has failed in both of its Briefs to expressly link any of the voluminous citations to the claimed functions or state with specificity what WSOU actually contends the algorithm to be.

[6] Further, as discussed above, the processing platform-readable medium and network management platform cannot serve as the corresponding structure, given that these are general purpose computers performing special purpose functions, and thus the disclosure of an algorithm is required. *Williamson*, 792 F.3d at 1347.

II. U.S. Patent No. 6,999,727 ("the '727 Patent") (Case No. 6:20-cv-00543)

A. "a number of corrected errors (BCE) in a non-SCS base reference time period" (claims 1, 4-7)

WSOU's initial claim, that Huawei's modification to its proposed construction is evidence that this disputed term should be afforded its plain and ordinary meaning (*See* Reply at 5), has a simple rebuttal – upon further review of its proposed claim terms and constructions, Huawei determined that the issue presented by the phrase "corrected errors" is best addressed in this term. WSOU's second contention, that the claim language itself provides the definition for this claim term (*see* Reply at 5), is false. The claim language does not address the issues that need to be addressed by the Court – namely, the clarification of the term "corrected errors" and holding WSOU to statements made by the patent applicants during prosecution. *See* Resp. at 11.

WSOU's remaining complaints regarding the applicants' statements concerning the Cooper reference are all misplaced. *See* Reply at 6. First, the words "different than" in Huawei's proposed construction clarify that there are two different time periods – or, in other words, time periods that are separate and distinct from one another. In addition, and contrary to WSOU's assertion, the applicants clearly and unambiguously distinguished Cooper as it only sampled data during a single time period (i.e. window size), and did not disclose, in the applicants' words, a "different time period" outside of the sample period. Resp., Ex. 1 at 6. The disavowal is thus clear. Only Huawei's proposed construction follows the teachings in the specification and the disavowing statements from the prosecution history and, as such, it should be adopted by the Court.

B. "means for implementing a Performance Monitoring function based on data retrieved through a Forward Error Correction function" (claims 4, 5)

WSOU ignores Huawei's responsive arguments and instead re-argues in its Reply Brief that the "telecommunication network management system" is the proper corresponding structure. *See* Reply at 7. However, as explained in Huawei's Responsive Brief, the claim language itself

precludes the possibility that the "telecommunication network management system" is the proper corresponding structure for these means-plus-function claim terms. *See* Resp. at 14-15. Specifically, the claims require that the "telecommunication network management system" must comprise the claimed "means for implementing." *See e.g.,* '727 Patent, at claims 4 and 5 (claiming "[a] management system of a telecommunication network, ***comprising***…" and "[a] telecommunication network having a management system . . . ***comprising***….") (emphasis added).

WSOU spends the remainder of its Reply Brief again pointing to extensive blocks quotes of "exemplary algorithms" from the specification without any meaningful explanation as to which, if any, are allegedly linked to the claimed function. *See* Reply at 7 ("[t]o the extent an algorithm is required, exemplary algorithms disclosed in the specifications are recited at '727 patent, 1:63-2:21, 2:36-4:54, Figure 1, and equivalents thereof."). However, as noted in Huawei's Responsive Brief, if WSOU's citations to Figure 1 and nearly three whole columns of the specification demonstrate structure clearly linked to this single claimed function, then the same structure would be clearly linked to ***all*** of the claimed functions in both claims 4 and 5. In reality, the only structure clearly linked to the claimed function is the algorithm of Figure 1, as proposed by Huawei. *See* Resp. at 16. As such, Huawei's proposed construction for this term should be adopted.

C. "means for classifying said blocks either as corrected or uncorrected through the Forward Error Correction function" (claims 4, 5)

At the outset, it is important to note that WSOU provided no rebuttal to the testimony of Huawei's expert, Dr. Sharma, who found, in sum, that a POSITA would not have found the corresponding structure proposed by WSOU for this term to be sufficient, or clearly linked to the claimed functions. *See generally,* Resp., Ex. 11, at ¶¶ 29-37. As such, Dr. Sharma's expert testimony stands unrebutted. As WSOU failed to proffer the testimony of any rebuttal expert, WSOU can only argue that Dr. Sharma's expert Declaration is "conclusory." *See e.g.,* Reply at 8-

9 ("the Sharma Declaration's testimony . . . is conclusory . . . and should not be given any weight."). However, the scope and detail of Dr. Sharma's Declaration and the well-reasoned opinions and conclusions regarding the indefiniteness of this means-plus-function term evidences otherwise.

Additionally, WSOU failed to respond to Huawei's arguments that the structure that WSOU identifies – the primitives obtained from the FEC function – relates to the other "obtaining" limitations of claims 4 and 5. *See* Resp. at 17-18. Moreover, WSOU provides no response to Huawei's argument that "classifying" is a separate and specific function (*see* Resp. at 18), and nothing WSOU cites to relates to "classifying data." *See* Reply at 8. Rather, WSOU argues in a conclusory fashion that the FEC ***necessarily*** performs the classification function because the primitives are the end result, yet WSOU cites to no evidence to support its position. *See* Reply at 8 ("it is the Forward Error Correction function that performs the classifying thus making the primitives (the result of the classifying) available to be obtained."). That WSOU has no support for its contention is not surprising since there is no disclosure anywhere in the specification as to how to classify blocks either as corrected or uncorrected through the Forward Error Correction function. *See* Resp., Ex. 11 at ¶¶ 32-34, 36-37. While it could, in theory, be possible for a FEC function to perform the step of classifying blocks as correct or uncorrected, as Dr. Sharma testified (and as WSOU failed to rebut), the fact is that there no disclosure in the specification to support that notion. *See id.* Without any clear link to any structural component or algorithm in the specification for performing the claim function, claims 4 and 5 of the '727 Patent are indefinite.

D. "means for calculating the Performance Monitoring function by implementing a correlation of the information regarding said correct and uncorrected blocks" (claims 4, 5)

WSOU again ignores Huawei's responsive arguments and instead re-argues that the "telecommunication management system" is the proper corresponding structure. *See* Reply at 9. However, as explained in Huawei's Responsive Brief, the claim language itself makes clear that

the "telecommunication management system" cannot be the proper corresponding structure for this means-plus-function limitation. *See* Resp. at 19. Specifically, the claims require that the "telecommunication network management system" must comprise the claimed "means for implementing."[7]

In addition, WSOU appears to argue that seemingly unidentified components of a telecommunication system could carry out this function because "telecommunication network management systems implementing Performance Monitoring systems" were allegedly known in the art. Reply at 9-10. This is false, and it conflicts with the explicit teachings of the specification. When discussing calculation of the PM function, the specification recites that the described calculations are inserted as hardware or software procedures "that are additional to the PM ones which are already generally provided and known to the man skilled in the art." '727 Patent, at 4:39-43. Thus, the "means for calculating the Performance Monitoring function" is different from (i.e., additional to) already existing performance monitoring functions. As such, contrary to WSOU's assertion, known performance monitoring functions cannot be the corresponding structure for the present mean-plus-function term.

WSOU's repeated citations to extensive block quotes of "exemplary algorithms" are improper as WSOU provides no clear explanation as to which, if any, are allegedly clearly linked to the claimed function.[8] However, as Huawei noted in its Responsive Brief, if it is true that WSOU's citations to Figure 1 and nearly three columns of the specification demonstrate structure

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[7] *See e.g.,* '727 Patent, at claims 4 and 5 (claiming "[a] management system of a telecommunication network, ***comprising***…" and "[a] telecommunication network having a management system . . . ***comprising***….") (emphasis added).

[8] *See* Reply at 10 ("[t]o the extent an algorithm is required, ***exemplary*** algorithms disclosed in the specifications are recited at '727 patent, 1:63-2:21, 2:36-4:54, Figure 1, and equivalents thereof.") (emphasis added).

clearly linked to the above function, then the same structure would be clearly linked to ***all*** of the claimed functions in both claims 4 and 5. Indeed, WSOU has identified the ***exact same*** "algorithms" for this term that it did for the "means for implementing" term in Section B, above. While it is possible for the same structure to perform multiple functions, (*see* Reply at 10) it is improper for WSOU to cite to what is essentially the entire specification for each and every claimed function and argue that the same blanket citation is "clearly linked" to each function.[9] Finally, as admitted by WSOU, Figure 1 only shows the calculation of BCE and SCS, and does not disclose the structure of calculating the PM function by ***implementing a correlation***. *See* Reply at 10. The only structure clearly linked to the claimed function is the algorithm identified by Huawei. *See* Resp. at 20. As such, Huawei's construction for this term should be adopted.

E. "implementing a Performance Monitoring Function based on data retrieved through a Forward Error Correction Function" (claims 6, 7)

"classifying said blocks either as corrected or uncorrected through the Forward Error Correction function" (claims 6 and 7)

WSOU largely repeats the same arguments it made in its Opening Brief in its Reply. As Huawei explained in its Responsive Brief, regardless of the claim type, style, or structure, the proper analysis is whether one of ordinary skill in the art would understand a claim written with functional language, in the context of the specification, to denote sufficiently definite structure or acts for performing the function. *See* Resp. at 21-22. Here, and unlike the cases cited by WSOU, the claims at issue are too generalized and recite purely functional language. Indeed, other than the format of the preamble, claims 6 and 7 are identical to claims 4 and 5 of the '727 Patent. *See id.* at 22 (noting that there is no additional information, detail, or structure identified in the claim

[9] *See Micro Chem., Inc. v. Great Plains Chem. Co.*, 194 F.3d 1250, 1258 (Fed. Cir. 1999) (holding that "corresponding structure" must not include structures beyond those necessary to perform the claimed function).

limitations themselves) This fact distinguishes the claims at issue here from those at issue in the cases cited by WSOU.

For instance, in *Virginia Innovation Sciences*, the claim at issue "recit[ed] substantial detail regarding instructions included in the program code." *Virginia Innovaction Sciences, Inc. v. Amazon.com, Inc.*, 2019 WL 4259020 at *31 (E.D. Tex. September 9, 2019). This fact stands in stark contrast to the claims at issue here, which only define the "program code" by the function it performs. The present claims are more akin to those in *Global Equity Mgmt. (SA) Ptd. Ltd. v. Expedia, Inc.*, No. 2:16-cv-95, 2016 WL 7416132, at *27-29 (E.D. Tex. Dec. 22, 2016), where the term "program code" was found to be subject to 35 U.S.C. § 112, ¶ 6 because it was "defined only by the function that it performs," and "[h]ow the code interacts with other code or structure of the claimed invention is not described." As such, the Court should find that the present terms are subject to § 112, ¶ 6.

III. U.S. Patent No. 7,508,755 ("the '755 Patent") (Case No. 6:20-cv-00535)

A. "originating network device" (claims 1, 3, 20)

In its Reply Brief, WSOU does not respond to Huawei's responsive arguments regarding the clear teachings of the specification as to the scope of the alleged invention and the '755 Patent's characterization of the "present invention." *See* Resp. at 23-24. Instead, WSOU re-hashes the same generic arguments it made in its Opening Brief regarding Huawei's proposed construction allegedly importing limitations into the claim language. *See* Reply at 12-13.

Tellingly, while WSOU repeatedly argues that the '755 Patent's use of the phrase "existing MPLS Fast Re-routing techniques" means that Huawei's proposed construction should be rejected, WSOU fails to identify any embodiment from the specification that would be omitted by Huawei's proposed construction and the intrinsically-supported clarification therein distinguishing between source and originating network devices. Indeed, it is clear from the teachings of the specification

that resolving problems involving MPLS Fast Re-routing is precisely what the alleged invention of the '755 Patent is all about. *See generally,* '755 Patent, at 1:15-49.

WSOU also argues that Huawei's proposed construction is improper because there is no requirement for "a primary LSP" anywhere in the claim language. *See* Reply at 13. This is illogical, as there must be a "primary LSP" in order for there to be an "alternate" path.[10] Huawei's proposed construction is the only construction that takes into account the distinction made by the patent applicant between a source network device and an originating network device, the definition of what is allegedly "the present invention," and the proper scope of the alleged invention given the disclosures in the specification. As such, Huawei's proposed construction should be adopted.

B. "switch over message" (claims 1, 5, 8, 10, 13, 16, 18, 20, 23, 25)

WSOU's Reply Brief focuses on the portion of Huawei's construction clarifying that the claimed switch over message "is not a message that indicates a fault has occurred in the network." Reply at 13-14. As shown in Huawei's Responsive Brief, this portion of Huawei's proposed construction comes directly from several unequivocal statements made by the patent applicant during prosecution in order to overcome numerous rejections from the Patent Office. Resp. at 26-27. In response, WSOU argues that the statements made by the applicant amount to only an "ambiguous disavowal," and thus should not impact claim construction. Reply at 14.

To support its argument, WSOU focuses on one sentence from a Request for Reconsideration to a Final Office Action. *See id.,* citing Ex. 5 from Huawei's Resp. Brief. However, WSOU misinterprets and misunderstands the applicant's representation. Specifically,

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[10] *See, e.g.,* '755 Patent, at 2:11-12 ("As shown in FIG. 1, a primary bi-directional LSP 100 includes network devices 110, 120, 130, 140, 150, and 160"); 2:64-65 ("at step 260, whether the associated network device is a source network device of a primary LSP"); claim 1 ("re-route traffic traveling along a bi-directional LSP in a forward direction to an *alternate path* in the forward direction") (emphasis added). If there is no primary LSP, then the term "alternate" has no meaning in the context of the claims.

in the Request for Reconsideration, the applicant explained (again) why Carpini does not disclose a switch-over message, even though Carpini uses the terms "re-routing" and "divert" with respect to how a router may respond upon receiving a fault indication message. *See* Resp. at Ex. 5, 10-11; *see also* Ex. A, attached hereto, at ¶¶ 0003, 0007, 0013, 0014 [Carpini (US2003/0063613)]. The applicant stated that even though Carpini uses these two terms, it "does not indicate that Carpini's re-routing or diversion makes use of the claimed switch-over messages; ***in fact it does not***." Resp. at Ex. 5, 10-11 (emphasis added).

The applicant further explained that Carpini works by "redirecting data traffic . . . onto the secondary path" in response to the fault indication, and that interpreting the disclosures of Carpini "as having the same or similar meaning as the claimed switch-over message is unreasonable." *See* id. at 11. Put another way, even if Carpini's re-routing or diversion functionality was equivalent to the claimed "switch-over message" in the '755 Patent, Carpini is still distinguishable because it performs the "switch over" functionality as part of its response to the fault indication message, rather than (as claimed by the '755 Patent) the "switch over message" itself. In distinguishing Carpini, the applicant drew a clear line between the claimed "switch over message," and fault indication messages that result in the re-routing, diversion, or switching of traffic, as disclosed by Carpini.

WSOU's contention that Carpini's fault indication message could possibly perform both fault indication and also be a switch over message (see Reply at 14), is nonsensical. First, WSOU's argument directly conflicts with the applicant's statements regarding Carpini's redirection of traffic onto the secondary path in response to the fault indication message. *See* Resp., Ex. 5, at 11. Second, if Carpini's fault indication message could perform both indicating a fault and re-routing and diverting data, then the fault indication message of Carpini would indeed be a switch over

message. The end result of such a reading would be that Carpini cannot be distinguished from the claims of the '755 Patent, and that the claims of the '755 Patent are invalid.[11] Only Huawei's proposed construction for the term "switch over message" takes into account the express disclaimers made by the applicant during prosecution, and should thus be adopted.

C. "means for re-routing . . . in a backwards direction" terms (claims 8, 23, 25)

With regard to the present means-plus-function terms and those addressed in Sections D-F below, it is important at the outset to note that WSOU provided no rebuttal to the testimony of Dr. Lavian, who found, in sum, that a POSITA would not have found any of the corresponding structures proposed by WSOU for these means-plus-function terms for the '755 Patent to be sufficient, or to be clearly linked to the claimed functions. *See generally*, Resp., Ex. 2, at ¶¶ 74-132. As such, Dr. Lavian's expert testimony stands unrebutted.

With regard to the present terms, WSOU failed to respond to Huawei's responsive arguments and instead re-argues in its Reply the nonsensical position that the "merging network device" is the proper corresponding structure. *See* Reply at 14-15. However, as explained in Huawei's Responsive Brief, the claim language itself precludes the possibility that the "merging network device" is the proper corresponding structure for this means-plus-function claim term. See Resp. at 28-29. Specifically, the claims require that the "merging network device" must comprise the claimed "means for re-routing." *See, e.g.,* '755 Patent, at claims 8 and 23 (claiming a "merging network device which ***comprises means for*** . . . re-routing traffic . . . in the backwards direction.") (emphasis added).

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[11] Disclaimer statements do not get any clearer or unambiguous, and these are precisely the type of statements that the public must be permitted to rely upon. *See e.g., Computer Docking Station Components, Inc. v. Dell, Inc.*, 519 F.3d 1366, 1379 (Fed. Cir. 2008) (finding disavowal of claim scope where "the sum of the patentee's statements during prosecution would lead a competitor to believe that the patentee had disavowed coverage of laptops").

In its Reply, WSOU argues for the first time that "the specification teaches that a merging network device could be a control processing section, and the control processing section can also perform the recited functions." Reply. at 15. WSOU further argues that the "control processing section may be hardware, software, firmware, or some combination." *Id.* Whether or not the merging network device "could be a control processing section" does not alter the means-plus-function analysis, as it does not matter what the merging network device "could be"; the claim language clearly requires the identification of structure ***within the merging network device itself*** to perform the claimed functions. In addition, WSOU's argument is nonsensical, as the specification states that the "control processing section" is a ***component*** of the merging network device, rather than actually ***being*** the merging network device. *See* '755 Patent, at 3:17-18 ("a control processing section or the like *of a merging network device*.") (emphasis added).

Further, to the extent it is WSOU's contention that the broad statement from the specification that the control processing section "may be implemented using hardware, software, firmware, or some combination of the three" (*see* '755 Patent at 3:38-40), somehow saves this claim from indefiniteness, WSOU is again mistaken. Apart from the statement above, the specification provides no information or examples of any specific hardware components, software algorithms or firmware processing that can accomplish the claimed functions. At best, the specification provides a laundry list of ***potential*** structures, while not clearly linking any of them to the claimed functions.[12] However, this type of generic identification does not legally qualify as "corresponding structure" for computer-implemented functions, because it amounts to nothing

[12] *See e.g.,* '755 Patent, at 3:47-53 ("The control processing section may be implemented on several platforms and may comprise one or more of the following: an MPLS module, routing manager, ReSerVation Protocol-Traffic Engineer (RSVP-TE) module, a link module, and connection manager operation to carry out the functions described throughout this description.").

more than an identification of "black box" structures that perform a recited function or, at best, a listing of general purpose devices or electrical components.[13] These claims are therefore invalid.

D. "means for re-routing traffic traveling along a bi-directional LSP in a forward direction to an alternate path in the forward direction" (claims 20, 25)

WSOU repeats its strategy from Section C (above) for this term in its Reply Brief, again declining to address Huawei's arguments regarding the fact that the "originating network device" cannot serve as corresponding structure, because the claim language precludes the possibility of the "originating network device" being the corresponding structure because the claim language requires the identification of structure ***within*** the "originating network device" to perform the claimed function. *See, e.g.,* 755 Patent, at claim 20 (claiming an "***originating network device comprising*** . . . means for re-routing traffic . . . in a forward direction.") (emphasis added). And again, WSOU's contention that the "originating network device (network device 120) could be a control processing section, and the control processing section can perform the recited functions" (Reply at 16), is irrelevant, because it does not matter what the originating network device "could be." And, as mentioned above, WSOU's argument is nonsensical as the "control processing section" is a ***component*** of the network device. *See* '755 Patent, at 2:35-39 ("a control processing section or the like *of a network device*.") (emphasis added).[14] For all the reasons set forth above, including the unrebutted testimony of Dr. Lavian, these claims are indefinite and invalid.

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[13] *See Blackboard Inc. v. Desire2Learn, Inc.*, 574 F.3d 1371, 1383-85 (Fed. Cir. 2009) (finding a means-plus-function term indefinite where the specification disclosures were "essentially a black box that performs a recited function," because "how it does so is left undisclosed.").

[14] As with the previous disputed term, WSOU's reference to a "control processing section," and argument that the control processing section "may be implemented using hardware, software, firmware, or some combination of the three," fails to save this claim term from indefiniteness. As noted above, the generic identification of the "control processing section" and the corresponding list of potential "black box" structures is insufficient. *See Blackboard Inc.*, 574 F.3d at 1383-85.

E. "means for transmitting a switch over message along the alternate path in the forward direction to a merging network device responsible for re-routing traffic traveling along the bi-directional LSP in a backward direction to the alternate path in the backward direction" (claim 20)

"means for transmitting a switch over message, along the alternate path in the forward direction, for re-routing traffic traveling along the bi-directional LSP in a backwards direction" (claim 25)

Repeating its argument that Huawei has rebutted in Sections C and D above, WSOU again contends that the "originating network device (network device 120) could be a control processing section, and the control processing section can perform the recited functions." Reply at 17-18. However, as explained more fully above, it is irrelevant what the originating network device "could be," as the claim language clearly requires that the corresponding structure be ***within the originating network device itself***. *See e.g.,* '755 Patent, at claim 20. As with the previous disputed terms, WSOU's reference to a "control processing section" and the statement that the control processing section "may be implemented using hardware, software, firmware, or some combination of the three," does not save these claims. *See Blackboard Inc.* 574 F.3d at 1383-85. For all the reasons set forth above, including the unrebutted testimony of Dr. Lavian, these claims are indefinite and therefore invalid.

F. "means for means for [sic] receiving traffic traveling along a bi-directional LSP in a forward direction to an alternate path in the forward direction" (claim 23)

Again, WSOU makes no attempt to respond to Huawei's responsive arguments and instead simply re-argues its initial contention that the "merging network device" is the proper corresponding structure. *See* Reply at 18-19. However, as explained more fully in Section C above, WSOU's argument that the "merging network device" constitutes sufficient corresponding structure is incorrect. For all the reasons set forth above, including the unrebutted testimony of Dr. Lavian, this claim is indefinite and therefore invalid.

IV. U.S. Patent No. 8,417,112 ("the '112 Patent") (Case No. 6:20-cv-00540)

A. "determining whether said collected BER values worsen over time" (claims 1, 11)

WSOU's attempts to rebut Huawei's arguments that the patent applicant clearly disavowed the full scope of the current term during prosecution by specifying that "determining" is an "affirmative" step by comparing collected BER values, instead of merely being indicated by/inferred from BER deterioration (*see* Resp. at 36-38), all fail, as set forth below.

First, WSOU asserts that the applicant disagreed with the PTO examiner's reading of Vieregge, and so a clear disavowal cannot be found. *See* Reply at 20. While the applicant did disagree with the examiner, claiming that "[t]he cited portion of Vieregge does not support the Examiner's conclusion that Vieregge discloses" the claim elements, such a statement does not make applicant's disavowal "ambiguous." *See* Resp., Ex. 9 at 16. As even WSOU cannot deny, if the applicant had agreed with the examiner's conclusion in the appeal brief, ***the claims of the '112 Patent would never have been allowed***. By WSOU's logic, unless a patent applicant agrees with an examiner's rejection that the claims at issue are unpatentable, no disavowal can attach. WSOU's contention is illogical and contrary to the law.

Second, contrary to WSOU's interpretation, the applicant actually rebutted *two* embodiments of Vieregge during prosecution, the first where a switch will be triggered when two BER thresholds are crossed in a short enough period of time, and the second where a switch will be trigger when one latest BER exceeds a threshold IBr and a rate of increase between two consecutive measurements exceeds some value. *See* Resp. at 36; *see also* Resp., Ex. 9 (Appeal Brief), at 14-17. However, the examiner took the position that the BER deterioration in those embodiments can ***indicate/infer*** that the BER values have been determined to worsen over time, and so "otherwise why bother to switchover." *See* Resp. at 36.

After failing to overcome the examiner's rejections during prosecution, the applicant filed an appeal brief, where the applicant (1) again rejected the examiner's theory built on indication/inference from BER deterioration, (2) explicitly indicated that the current term is associated with the specification disclosures at 5:34-46 with respect to determining whether the collected BER values worsen over time by comparing them, and (3) specified how to compare in view of Fig. 3 (comparing at step 318, then determining at step 320) ***as currently construed by Huawei***. *See id.* at 36-38. After the appeal, and in light of applicant's arguments, the '112 Patent was allowed. Despite this fact, WSOU argues now that Huawei's citations are only *exemplary* embodiments. *See* Reply at 20. However, without filing an appeal brief to further clarify that the "determining" as claimed is an "affirmative" step by comparing BER values as opposed to a passive indication/inference from BER deterioration, the '112 Patent would not have issued. Moreover, WSOU fails to cite any embodiment that is in conflict with or in addition to the "determining" by comparing as construed by Huawei.[15]

Finally, WSOU fails to respond to Huawei's answer to the question of "how comparing merely one recent value can show 'worsen over time,'" in view of 5:40-42. *See* Resp. at 39. To be clear, Huawei's proposal has specified that one or more recent values can be compared ***with*** other collected BER values. Therefore, the ***one*** recent value does not compare with itself. WSOU's argument is illogical and should be disregarded, and Huawei's proposed construction should be adopted by the Court.

[15] Additionally, WSOU asserts that the phrase "the recent ones of said collected BER values" in Huawei's proposal is not reflected in the current term but in prior claim elements. *See id.* at 20. However, this phrase is included in Huawei's proposed construction based on applicant's disavowal regarding how to compare said collected BER, and so whether it has been recited by prior claim elements is irrelevant

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CERTIFICATE OF SERVICE

I hereby certify that all counsel of record who are deemed to have consented to electronic service are being served with a copy of this document via the Court's CM/ECF system.

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